

OSPAR CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT OF THE
NORTH-EAST ATLANTIC

MEETING OF THE OSPAR COMMISSION (OSPAR)

BREMEN: 23-27 JUNE 2003

**Guidance on a Common Approach for Dealing with Applications for the
Construction and Operation of Offshore Wind-Farms**

(Reference Number: 2003-16)

Introduction

1. The Quality Status Report 2000 for the North-East Atlantic refers to a conclusion by the Intergovernmental Panel on Climate Change (IPCC) that increases in greenhouse gases are contributing to global warming. It notes that such changes may lead to major climate-system changes with resulting impacts on the ocean and its biota. In response to global warming, OSPAR Contracting Parties have signed and ratified, approved or acceded to the Kyoto Protocol to the United Nations Framework Convention on Climate Change, thereby committing themselves to reduce by 2008 – 2012 overall emissions of greenhouse gases to 5% below the 1990 emission levels.

2. In this context, the use of energy from renewable resources plays an important role. Wind energy can contribute considerably to the national goals of CO₂ reduction and seems indispensable in this respect due to its potential to avoid substantial amounts of CO₂ emissions every year. As a consequence, the use of wind energy is expanding in Europe, which includes making use of offshore wind-energy potential. While, on the one hand, avoiding CO₂ emissions by means of the use of wind turbines is welcome, the construction of wind-farms at sea requires consideration and mitigation of the impacts that such installations may have on the marine environment. This document, therefore, aims to provide guidance on a common approach by the OSPAR Contracting Parties when dealing with applications for the construction and operation of offshore wind-farms.

3. The guidance is divided into sections dealing with:

- A. Aspects of Licensing Procedures for Offshore Wind-farms
- B. Main requirements to be fulfilled by an Offshore Wind-farm
- C. Minimum criteria to be considered in environmental impact assessments (EIA)
- D. Guidance on how to define areas suitable or unsuitable for the location of wind-farms.

A – Aspects of Licensing Procedures for Offshore Wind-farms

4. Contracting Parties should include the following items in their licensing procedures for offshore wind-farms:

I. Involvement of other authorities

5. The approval authority should forward the application documents to the full range of authorities which, by reason of their specific responsibilities, are likely to be concerned by the project (e.g. local authorities, authorities which are responsible for the safety of navigation, nature conservation, cables and pipelines, military, fisheries, submarine exploitation of the seabed) and should ask them for their comments within a reasonable time frame.

II. Involvement of the public/stakeholders

6. The approval authority should make the application documents available for public consultation for a reasonable period of time and should ensure that this fact is published in regional and national newspapers. The public should be given the opportunity to comment in writing on the planned project within a reasonable time frame, including the public affected or likely to be affected by, or having an interest in, the planned

project and relevant non-governmental organisations, such as those promoting environmental protection, commercial or recreational shipping, fishing or energy from renewable sources. In this context, the “public” includes any one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.

III. Involvement of the authorities of a neighbour state

7. Where the approval authority considers that the implementation of a project is likely to have significant effects on the environment of the territory of another state (including the maritime areas under the jurisdiction of that state), the latter should be notified of the project. The potentially affected state should respond to the approval authority acknowledging receipt of the notification and indicate whether it intends to participate in the procedure. If the potentially affected state desires to participate in the procedure or in transboundary consultations, the approval authority should forward the application documents to the competent authority in that state and ask for its comments within a reasonable period of time.

8. When no notification has taken place, but a neighbouring state considers that it would be affected by the project, the approval authority should forward the application documents to that neighbouring state if it so requests.

IV. Environmental Impact Assessment (EIA)

9. Contracting Parties should agree on characteristics or thresholds which determine whether a project is to be subject to an Environmental Impact Assessment (EIA) – e.g. a specific number of turbines. The applicant should be required to investigate and assess the area of the planned project in accordance with agreed standards of EIA. Where projects have not been informed through a Strategic Environmental Assessment or other relevant scientific knowledge, gathering environmental data for an EIA could take at least two years.

B – Main requirements to be fulfilled by an Offshore Wind-farm

I. No endangerment and obstruction of shipping and aviation

10. The safety of shipping and aviation should not be compromised by windfarms and the impact of windfarms on the efficiency of shipping and aviation should be minimised. Therefore the approval authority should develop requirements to be met by, and measures to be applied to, the project, such as regulations for requiring lights on the wind-farm, safety distances to shipping routes, safety zones around the farm etc., that are appropriate to reduce the risk of possible ship collisions with wind turbines as well as the risk of other possible damage.

II. No hazards to marine environment

11. The erection and operation of wind turbines should not endanger the quality of the water and air or the conservation of the species using the area as their habitat. Disturbances of sedimentary or hydrodynamic processes which have a significant impact should be prevented.

12. The threat of marine pollution which might be caused by any hazardous substances originating from wind turbines should be prevented. The risk of the release of pollutants caused by the collision of a ship with a wind turbine should be reduced to an acceptable minimum. Provision, therefore, has to be made to prevent collisions and for minimising the impact of pollutants on the sea and the coastline.

III. No hazards to bird migration

13. The construction and operation of a wind-farm should not endanger bird migration. Birds may be affected by loss of habitat, e.g. in connection with resting and foraging, in areas where wind-farms have been constructed. They may also be killed or injured by collision with the installations. Wind-farms may be a barrier for birds on their long-distance migrations or on their flight from feeding grounds to sleeping or breeding grounds. The EIA provides the basis to evaluate the impact of the specific project on bird migration. The impact on the population level of a species of the specific wind-farm as well as the impact on the number of birds and the characteristics of the species should be investigated and considered.

IV. Other interests/uses of the sea to be considered

14. Other interests or uses of the sea which are likely to be affected by the project (e.g. tourism, military activities, commercial fishery, landscape conservation) should be considered in the procedure.

C – Minimum criteria to be considered in environmental impact assessments (EIA)

I Objectives

15. The objective of an Environmental Impact Assessment is to give the approval authority a basis of information for estimating the consequences that a project might have for the environment, which have to be considered in granting an approval. It should assist the promoter to define the construction that is to be preferred and inform the public in order to facilitate their participation in the decision-making process. The environmental features that may be affected are flora (sea grass, macroalgae) and fauna (fish, benthos, birds and mammals), water, soil (seabed, sediment and associated features such as sandbanks), landscape, human-beings and cultural heritage. Therefore the applicant should investigate the area in order to:

- a. determine and assess the spatial distribution of such features, their temporal variability (where applicable) and their condition (“baseline survey”);
- b. describe the effects that the construction, operation and eventual decommissioning of the wind turbines, including scour protection, might have on these features;
- c. survey the actual utilisation/exploitation of the area and any conflicts that may arise;
- d. assess the sensitivity of the natural resources of the area;
- e. assess any cumulative effects and any impact interactions a project might have with other projects, whether wind-farms or other types of construction, that have been, or will definitely be, carried out in the near future.

16. If an assessment is due under the Birds Directive (79/409/EEC) and the Habitat Directive (92/43/EEC), this should be included in the EIA.

II. Potential adverse impacts

17. As far as concerns possible impacts of offshore wind-farms on the marine environment, various risks during the construction and operation phases are relevant, e.g. bird collision, loss of habitat, disturbance of benthos, fish and sea mammals. An overview of potential impacts is being further developed by the OSPAR Biodiversity Committee. The EIA should consider mitigation measures that will prevent, reduce or compensate possible adverse impacts.

III. Precautionary approach

18. In order to enable prediction of effects and to avoid large-scale substantial impacts, the results of monitoring should provide a rapid feedback if effects are detected.

IV. Landscape and risk analysis

19. A visualisation of the impact of the wind-farm on the landscape should be prepared for projects planned within a range visible from the coast (e.g. by computer simulation or photomontage). Such a visualisation should only be demanded to the extent that the economic burden on the applicant is reasonable.

20. A state-of-the-art risk analysis assessing the probability of a ship collision with a wind-farm, both with and without accidental pollution (worst case scenario), should be carried out and presented in the framework of the baseline surveys preceding the pilot phase. This would only be necessary where, due to specific conditions (e.g. navigable water depth), there may be a risk of such an accident.

V. Monitoring area

21. The “monitoring area” comprises the planning or construction area, including the cable route, and the reference area. The individual environmental features that may be affected require different areas in terms of size and location. Reference areas will be used for comparison, where applicable, to document the development of the environmental features that may be affected without the impact of wind turbines. The reference areas should as far as possible be located outside the planning area and their natural ambient conditions should correspond to those in the planning area.

D – Guidance on how to define areas suitable or unsuitable for the location of wind-farms

I. Definition

22. A general definition for areas suitable for the location of wind farms could read:

“an area which could be identified as a location where the construction of an offshore wind-farm would not conflict substantially with other interests and where existing data on marine environment as well as the results of a baseline survey or other environmental monitoring programmes verify that wind turbines would only have negligible adverse impacts on environmental features.”

II. Interests to be considered

23. The following interests should be considered in the first place in order to find suitable areas for the location of wind-farms:

1. Nature conservation

Ecologically valuable areas or designated conservation sites should not be designated as a suitable area for installing a wind-farm, though a single project might be admitted if it is consistent with the objectives of a designated site or protected species or the general provisions of the legislation under which they are identified or where advanced monitoring programmes verify that wind turbines have no adverse impacts on the marine environment.

Existing indicators for conservation areas are:

- a. components of the OSPAR Network of Marine Protected Areas (MPAs) under the OSPAR Convention;
- b. Special Protection Areas (SPAs) under the Birds Directive (97/409/EEC) and candidate Special Areas of Conservation (cSACs) under the Habitat Directive (92/43/EEC);
- c. Habitats and species protected under the Ramsar, Bonn or Berne Conventions;
- d. Important Bird Areas (BirdLife Conservation series).

Matters to be considered by Contracting Parties in relation to nature conservation:

- e. Contracting Parties are encouraged to develop and implement marine research and monitoring programs;
- f. Collected data and information on marine nature should be exchanged between Contracting Parties;
- g. Baseline data and monitoring requirements should probably be more stringent in nature conservation areas than elsewhere;
- h. Conditions may need to be attached to any consent which may restrict working practices and therefore increase costs. For example tidal, daily or seasonal restrictions;
- i. Compensation measures may be required to compensate for lost habitats.

2. Safety and efficiency of shipping

In order to reduce the risk of pollution, designated shipping routes and main traffic routes should generally be kept free from any obstacles. Suitable areas for wind-farms should consequently be designated with sufficient distance from these routes. The main traffic generally takes place on the shortest connection between certain ports of loading and discharge. The density of the local area traffic should also be considered. Areas that pose in themselves a certain risk to shipping, due to their natural or artificial conditions (e.g. narrow straits), should not be selected as a suitable area for the location of a wind-farm.

3. Safety of aviation

The installation of wind-farms should not compromise the safety of aviation.

4. Other uses/exploitations

Other uses of the sea, such as sand and gravel extraction, pipelines, cables, military activities, fisheries and shell-fisheries and the landscape (tourism) should be taken into account. Possible conflicts and cumulative effects should be anticipated.

Particular issues which may need to be considered include:

Fishery/shell fishery

- a. The level of the importance for fishery/shellfishery would be indicative of any difficulties that may arise.
- b. Again this may lead to stringent baseline requirements and monitoring.
- c. Consenting restrictions may restrict working practices and increase costs.

Changes in hydrodynamics and sedimentary processes

- d. Areas of coastline known to suffer increased rates of erosion are particularly vulnerable to any changes to processes along the coast. Such changes may have direct consequences to any flood defence strategies.
- e. Stringent baseline requirements and monitoring will be required which will include validation and calibration of any models used.
- f. The distance from the shoreline may need to be altered as may the shape of the wind-farm in order to try to mitigate any predicted impacts.
- g. If the site is located within a sedimentary system such as sandbanks this feature may itself require preserving.

Any of the above could ultimately lead to a consent being declined or the requirement for the wind-farm and/or its cable route location to be changed. However, it is more likely that these issues will cause an application to incur increased costs caused by baseline data collection, modelling, mitigation including changes to working practices and restrictions and monitoring costs.

5. Effective use of energy source

The area should be suitable in respect of its potential as an effective energy source. Therefore the speed and number of days of wind shall be considered.

III. Procedure

24. As a first stage, all interests which might be affected by the construction of an offshore wind-farm should be ascertained.

25. As a second stage, all authorities and stakeholders whose interest or area of responsibility might be concerned (i.e. authorities responsible for nature conservation, safety of shipping, military, cables, pipelines, submarine exploitation of the seabed etc) should be asked to examine existing data and to indicate areas where conflicts with their interests are not expected.

26. As a third stage, areas where no conflicts, or the least conflicts, are expected should be identified.

27. As the last stage, these areas should be surveyed in respect of marine species and other environmental features. This baseline survey will decide whether an area will generally be suitable for the installation of a wind-farm.

IV. Further Planning and Guidance Instruments for Application Processes for Offshore Wind-farms

To allow for early and efficient guidance for applications for wind-farms in offshore areas, planning instruments such as Strategic Environmental Assessment (SEA)¹ and spatial planning should be introduced.

¹ For Contracting Parties which are Member States of the European Union, Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment will be relevant.